

120. (currently amended) A boiler for protecting a memory module located within a hardened voyage recorder from low temperature fires, comprising:

(a) a containment compartment for containing a thermal mass;

(b) a protective compartment within which said memory module is located; and

c/ (c) means for interconnecting said containment compartment and said protective compartment, wherein; and

~~said means for interconnecting, when open, provides a passageway for said thermal mass to flow between said containment compartment and said protective compartment and protect~~

(d) means for protecting said memory module from temperatures on the order of 260°C for approximately ten hours.

121. (original) A boiler as set forth in claim 120 wherein memory module includes solid state BGA memory.

122. (original) A boiler as set forth in claim 120 wherein said memory module is stacked memory.

123. (original) A boiler as set forth in claim 120 wherein said boiler further includes a cover plate which covers said protective compartment.

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124. (original) A boiler as set forth in claim 123 wherein said cover plate is press fit to said boiler.

125. (original) A boiler as set forth in claim 120 wherein said thermal mass includes a phase change material (PCM).

126. (original) A boiler as set forth in claim 125 wherein said PCM utilizes the energy absorption from vaporization to absorb heat.

127. (original) A boiler as set forth in claim 125 wherein said PCM is water.

128. (original) A boiler as set forth in claim 127 wherein said water is contained in a dry material which inhibits the water from freezing or expanding.

129. (original) A boiler as set forth in claim 128 wherein said dry material comprises sponge, silica, polyacrylamide, calcium silicate or pottery clay.

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130. (original) A boiler as set forth in claim 125 wherein said thermal mass is a dry powder formed by combining water and silica.

131. (original) A boiler as set forth in claim 120 wherein said thermal mass absorbs shock.

132. (original) A boiler as set forth in claim 131 wherein said thermal mass is a gel formed by combining water and polyacrylamide.

133. (original) A boiler as set forth in claim 120 further comprising a fusible valve that opens at a predetermined temperature to allow said thermal mass to flow through said passageway.

134. (original) A boiler as set forth in claim 133 wherein said fusible valve comprises at least one thermal vent plug which is released at a predetermined temperature.

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135. (original) A boiler as set forth in claim 134 wherein said thermal vent plug comprises wax, paraffin, a bismuth alloy or electrical solder.

136. (currently amended) A boiler for protecting a memory module located within a hardened voyage recorder from low temperature fires, comprising:

(a) a containment compartment for containing a thermal mass;

(b) a protective compartment within which said memory module is located; and

(c) means for interconnecting said containment compartment and said protective compartment, wherein said means for interconnecting, when open, provides a passageway for said thermal mass to flow between said containment compartment,

wherein said boiler includes a cover plate which covers and adds structural integrity to said protective compartment, said cover plate defining a through hole spaced apart from its edge and completely bounded by said cover plate, and said memory

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module is coupled to a cable which extends through said through hole.

137-141 (withdrawn from consideration).
